IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Bargnes et al.	Confirmation No.:	4629
Serial No.:	10/705,359	Group Art Unit:	3623
Filed:	November 10, 2003	Examiner:	Chong Cruz, Nadja N.

Attorney Docket No.: IN-5398CIP

Title: METHOD OF DETERMINING AN EFFICIENCY OF A REPAIR PROCESS

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Commissioner of Patents
P.O. Box 1450
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SUBSTITUTE APPEAL BRIEF

Dear Sir:

In response to the Notification of Non-Compliant Appeal Brief mailed on August 10, 2009 and subsequent to the filing of the Notice of Appeal on May 12, 2009, Applicant now submits a substitute brief in support of the appeal.

REAL PARTY IN INTEREST

The real party in interest in this Application is BASF Corporation, the assignee of all right and interest in the Application.

RELATED APPEALS OR INTERFERENCES

There are no such related appeals or interferences.

STATUS OF CLAIMS

Claims 1-32 are pending in this Application and all of the claims are being appealed. Claim 1-32 stand finally rejected under 35 USC § 103.

STATUS OF AMENDMENTS

No amendments after final rejection have been filed. However, a Request for Reconsideration was filed on March 12, 2009, which is subsequent to the final rejection. Although unsuccessful, the Request for Reconsideration was addressed by the Examiner in an Advisory Action mailed on March 19, 2009. There was also a Pre-Appeal Brief Request For Review filed on May 12, 2009. A Notice of Panel Decision from Pre-Appeal Brief Review was mailed on May 27, 2009 indicating that claims 1-32 remain rejected.

SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 is the only independent claim and includes the following subject matter. The preamble sets forth a method of determining an efficiency of a repair process for a vehicle in a

repair shop utilizing a computer as stated in paragraph 0068. The method comprises the following steps.

As mentioned in paragraphs 0049, 0063, 0065 and 0068, a vehicle identifier 418 for the vehicle is created and the identified vehicle is examined to locate areas on the identified vehicle in need of repair.

An extent of a repair for the identified vehicle based on the examination is then estimated and a total labor hours to perform the repair process based on the extent of the repair is estimated as mentioned in paragraphs 0050, 0064, 0065 and 0068.

A vehicle production start period based upon when the repair process of the identified vehicle begins is determined and a vehicle production finish period based upon when the repair process of the identified vehicle ends is determined as discussed in paragraphs 0066, 0070 and 0071.

As set forth in paragraphs 0074 - 0080, a total shop production hours based upon when the repair shop opened and closed for each day between the vehicle production start period and the vehicle production finish period is determined.

An estimate of the extent of the repair, an estimate of the total labor hours, the vehicle production start period, the vehicle production finish period and the total shop production hours are inputted into the computer as discussed in paragraphs 0064 and 0069.

The computer is utilized to calculate a production process efficiency for a completed repair process by dividing the estimated total labor hours by the total shop production hours thereby revealing a true percentage efficiency of the repair process by calculating the production process efficiency utilizing hours as discussed in paragraphs 0027, 0046, 0062,

0068, and 0079-0081.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-22, 26 and 30-32 are properly rejected under 35 USC §103 as being unpatentable over McGuire et al. (U.S. Patent No. 4,404,639) in view of Inoue (U.S. Patent No. 5,317,503) and further in view of Baldwin et al. (Article entitled "Transfer Pricing for Air Force Depot-Level Reparables", RAND, 1998).

Whether claims 23-25 and 27-29 are properly rejected under 35 USC §103 as being unpatentable over McGuire et al. in view of Inoue in view of Edwards *[sic]* and further in view of Official Notice. It is noted that the Examiner has made a typographical error in this rejection. In particular, past rejections using Edwards have been overcome and there are no rejections of the underlying independent claim (claim 1) using Edwards. As such, Edwards should be replaced with Baldwin et al.

ARGUMENT

I. Rejection of Claims 1-22, 26 and 30-32 under 35 USC §103.

The thrust of the Applicant's arguments on appeal relate to the inadequacy of the rejection of claim 1, which is the only independent claim. As such, the following discussion is focused on the inappropriateness of the rejection of claim 1.

As set forth above, claim 1 stands rejected under 35 USC §103 as being unpatentable over McGuire et al. (U.S. Patent No. 4,404,639) in view of Inoue (U.S. Patent No. 5,317,503)

and further in view of Baldwin et al. (Article entitled "Transfer Pricing for Air Force Depot-Level Reparables", RAND, 1998).

In short, Applicant contends that the Examiner has misinterpreted Baldwin et al. such that this prior art is merely cumulative of previously overcome prior art and that the Examiner has failed to set forth a *prima facie* case of obviousness.[1] As stated in greater detail below, Applicant contends that even taking into consideration the purported combination, critical limitations of claim 1 are not disclosed or taught by the prior art of record.

As noted by the Applicant in the Amendment filed on October 13, 2008, the Examiner has properly determined that some limitations claimed in claim 1 are know in the industry. However, as noted on page 10 of the October 13th Amendment, on page 2 of the Request for Reconsideration filed on March 12, 2009 and throughout the Pre-Appeal Brief Request for Review filed on May 12, 2009, the prior art uncovered by the Examiner is too generic and will produce erroneous measurements that the subject invention is specifically designed to eliminate. Specifically, Applicant contends in the Amendment, Request for Reconsideration and Pre-Appeal Brief that the Examiner has failed to uncover a prior art reference that discloses or teaches the following two limitations found in independent claim 1:

- determining a total shop production hours based upon when the repair shop opened and closed for each day between the vehicle production start period and the vehicle production finish period, and

- utilizing a computer to calculate a production process efficiency for a completed repair

[1] The legal concept of *prima facie* obviousness allocates who has the burden of going forward with production of evidence. The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. MPEP 2142

process by dividing the estimated total labor hours by the total shop production hours thereby revealing a true percentage efficiency of the repair process by calculating the production process efficiency utilizing hours.

As explained in more detail below, there is no disclosure or teaching of determining a total shop production hours based on when a shop opens and closes. Therefore, because the total shop production hours is not determined, the production process efficiency, as defined, is likewise not calculated because one component of the calculation requires the total shop production hours. The Examiner previously indicated that Edwards disclosed a similar feature. In response, the Applicant respectfully submitted that the Examiner misinterpreted Edwards and the Examiner has now withdrawn this rejection.

In the Final Official Action mailed on January 12, 2009, the Examiner uncovered a new reference (known as Baldwin et al.) that purportedly disclosed the novel and non-obvious features of the claimed invention as set forth above. Applicant respectfully disagreed in the Request for Reconsideration and in the Pre-Appeal Brief and noted that Baldwin et al. was merely cumulative of Edwards.

In response to the Request for Reconsideration, the Examiner mailed an Advisory Action on March 19, 2009 and noted that:

> one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references

This response is completely misplaced as the Applicant is NOT attacking the nonobviousness of the combination. Instead, the Applicant contends that the Examiner has misinterpreted Baldwin et al. and that Baldwin et al. does not disclose or teach the feature at all. As such, even with the purported combination, critical limitations of claim 1 are not disclosed or taught by the prior art

of record. Therefore, Applicant respectfully asserts that clear error has been made in the Examiner's rejections based on Baldwin et al. As such, Applicant asserts that the Examiner has not established the requirements for a *prima facie* rejection of the claims based on 35 U.S.C. 103.

In response to the Pre-Appeal Brief, the panel determined that claims 1-32 remain rejected without any further explanation. The Applicant was therefore left with no option but to file the subject appeal. The following is an accurate description of Baldwin et al. as it applies to the claimed invention.

Baldwin et al. is a research report sponsored by the U.S. Air Force, which is entitled "Transfer Pricing for Air Force Depot-Level Reparables". On page 7 of the January 12th Official Action, the Examiner contends that Baldwin et al. discloses and teaches of developing an efficiency using total shop production hours. The Examiner contends that the following footnote in Baldwin et al. provides a basis for this teaching:

> [t]he DLE for a repair shop is the total standard hours for all work in the shop divided by the actual hours for all work in the shop, that is, an average efficiency.

It is respectfully submitted that the Examiner is incorrect and has misinterpreted Baldwin et al. Baldwin et al. actually measures the same variables and produces the same efficiency as the other cited prior art, such as Edwards, and will in turn produce erroneous measurements that the subject invention is specifically designed to eliminate.

Turning to pages 16 and 17 of Baldwin et al., the DLE, which stands for Direct Labor Efficiency, is a variable of the DPAH, which stands for Direct Product Actual Hours. As stated in Baldwin et al., the DPAH is an estimate of the actual time spent performing a direct labor

task.

The key issue that was apparently overlooked by the Examiner is that both of the variables used to calculate the DLE are related to the **work**, NOT the shop. Note the definition of the term DLE above, which states the DLE is the "total standard hours for all work in the shop divided by the actual hours for all work in the shop" (emphasis added). As such, the DLE calculates hours of the **work only** and does NOT provide any measurement or calculation taking into consideration the hours of the shop. In fact, there is no mention or teaching of determining the total shop production hours based on when the repair shop opens and closes. As such, it is impossible for Baldwin et al. to provide any disclosure or teaching of calculating the efficiency as defined in claim 1 as this efficiency calculation requires the total shop production hours based on when the repair shop opens and closes. Accordingly, the process of Baldwin et al. will not measure the particular production process efficiency that the claimed invention is designed to produce.

Accordingly, the newly cited Baldwin et al. reference is merely cumulative of the previously cited prior art that was previously overcome. Due to the Examiner's misinterpretations, the requirements for a *prima facie* rejection based on either 35 U.S.C. 103 have **not** been satisfied as there are critical limitations found in claim 1 that are not disclosed or taught by the prior art of record.

In sum, an obvious rejection using the prior art of record cannot be sustained against claim 1 and it is respectfully submitted that the rejection of this claim, as well as all of the dependent claims, under 35 USC §103 is improper. The Examiner's position in this rejection, which is wholly unsupported by the prior art cited, must be reversed.

II. Rejection of Claims 23-25 and 27-29 under 35 USC §103.

As set forth above, the Examiner has made a typographical error in this rejection. In particular, the rejection should state that Baldwin et al. is being used in the rejection and not Edwards. Once this correction is made, each of these dependent claims is being rejected over the same references as the underlying independent claim (claim 1) in further view of Official Notice. As such, once the rejection of claim 1 is reversed, the rejections of these dependent claims must also be reversed. It is therefore believed unnecessary to argue the adequacy of these rejections separately from the arguments regarding claim 1.

CLOSING

For the reasons set forth above, the rejection of claims 1-32 under 35 USC §103 must be reversed.

Respectfully submitted,

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CLAIMS APPENDIX

1. A method of determining an efficiency of a repair process for a vehicle in a repair shop utilizing a computer, said method comprising the steps of:

creating a vehicle identifier for the vehicle;

examining the identified vehicle to locate areas on the identified vehicle in need of repair;

estimating an extent of a repair for the identified vehicle based on the examination and estimating a total labor hours to perform the repair process based on the extent of the repair;

determining a vehicle production start period based upon when the repair process of the identified vehicle begins and determining a vehicle production finish period based upon when the repair process of the identified vehicle ends;

determining a total shop production hours based upon when the repair shop opened and closed for each day between the vehicle production start period and the vehicle production finish period;

inputting an estimate of the extent of the repair, an estimate of the total labor hours, the vehicle production start period, the vehicle production finish period and the total shop production hours into the computer; and

utilizing the computer to calculate a production process efficiency for a completed repair process by dividing the estimated total labor hours by the total shop production hours thereby revealing a true percentage efficiency of the repair process by calculating the production process efficiency utilizing hours.

2. A method as set forth in claim 1 wherein the step of determining the total shop production hours is further defined as determining a shop start period equal to the vehicle production start period, and determining a shop finish period equal to the vehicle production finish period.

3. A method as set forth in claim 2 wherein the step of determining the total shop production hours is further defined as determining a number of days between the shop start period and the shop finish period.

4. A method as set forth in claim 3 wherein if the number of days between the shop start period and the shop finish period is equal to one day, then the step of determining the total shop production hours is further defined calculating a number of hours between the shop start period and the shop finish period.

5. A method as set forth in claim 3 wherein if the number of days between the shop start period and the shop finish period is equal to two days, then the step of determining the total shop production hours is further defined as calculating a number of hours between the shop start period and a shop closing time for a first day to define a first day period and calculating the number of hours between a shop opening time for a second day and the shop finish period to define a second day period, and then adding the hours of the first day period to the hours of the second day period.

6. A method as set forth in claim 3 wherein if the number of days between the shop start period and the shop finish period is greater than two days, then the step of determining the total shop production hours is further defined as calculating a number of hours between the shop start period and a shop closing time for a first day to define a first day period, calculating the number of hours between a shop opening time for a last day and the shop finish period to define a last day period, and calculating the number of hours between shop opening and closing times for each day between the first and last day periods to define a middle day period, and then adding together the hours of the first day period, the middle day period, and the last day period.

7. A method as set forth in claim 1 wherein the step of determining the vehicle production start period is further defined as determining a vehicle production start date and a vehicle production start time based upon a date and time that the repair process of the identified vehicle begins.

8. A method as set forth in claim 7 wherein the step of determining the vehicle production finish period is further defined as determining a vehicle production finish date and a vehicle production finish time based upon a date and time that the repair process of the identified vehicle ends.

9. A method as set forth in claim 8 wherein the step of determining the total shop production hours is further defined as determining the total shop production hours based upon

when the shop opened and closed for each day between the vehicle production start date and time and the vehicle production finish date and time.

10. A method as set forth in claim 8 wherein the step of determining the total shop production hours is further defined as determining a shop start date and time equal to the vehicle production start date and time, respectively, and determining a shop finish date and time equal to the vehicle production finish date and time, respectively.

11. A method as set forth in claim 10 wherein the step of determining the total shop production hours is further defined as determining a number of days between the shop start date and the shop finish date.

12. A method as set forth in claim 11 wherein if the number of days between the shop start date and the shop finish date is equal to one day, then the step of determining the total shop production hours is further defined calculating a number of hours between the shop start time and the shop finish time.

13. A method as set forth in claim 11 wherein if the number of days between the shop start date and the shop finish date is equal to two days, then the step of determining the total shop production hours is further defined as calculating a number of hours between the shop start time and a shop closing time for a first day to define a first day period and calculating the number of hours between a shop opening time for a second day and the shop finish time to

define a second day period, and then adding the hours of the first day period to the hours of the second day period.

14. A method as set forth in claim 11 wherein if the number of days between the shop start date and the shop finish date is greater than two days, then the step of determining the total shop production hours is further defined as calculating a number of hours between the shop start time and a shop closing time for a first day to define a first day period, calculating the number of hours between a shop opening time for a last day and the shop finish time to define a last day period, and calculating the number of hours between shop opening and closing times for each day between the first and last day periods to define a middle day period, and then adding together the hours of the first day period, the middle day period, and the last day period.

15. A method as set forth in claim 1 wherein the vehicle production start period is further defined as having a vehicle production start date and time, and the vehicle production finish period is further defined as having a vehicle production finish date and time, and further including the step of calculating the days between the vehicle production start date and time and the vehicle production finish date and time to determine a number of days for a total vehicle production.

16. A method as set forth in claim 1 wherein the step of estimating the total labor hours to perform the repair process is further defined as estimating a total labor hours to be

sold to perform the repair process.

17. A method as set forth in claim 1 wherein the step of estimating the total labor hours to perform the repair process is further defined as estimating a total metal labor hours plus a total paint labor hours.

18. A method as set forth in claim 1 wherein the repair process of the identified vehicle begins when a predetermined event occurs within the repair shop, and wherein the step of determining a vehicle production start period is further defined as determining a vehicle production start period based upon when the predetermined event occurs.

19. A method as set forth in claim 18 wherein the predetermined event is further defined as a technician being assigned to the identified vehicle, and wherein the step of determining a vehicle production start period is further defined as determining a vehicle production start period based upon when the technician is assigned to the identified vehicle.

20. A method as set forth in claim 1 wherein the repair process of the identified vehicle ends when a predetermined event occurs within the repair shop, and wherein the step of determining a vehicle production finish period is further defined as determining a vehicle production finish period based upon when the predetermined event occurs.

21. A method as set forth in claim 20 wherein the predetermined event is further defined as a technician being unassigned to the identified vehicle, and wherein the step of determining a vehicle production finish period is further defined as determining a vehicle production finish period based upon when the technician is unassigned to the identified vehicle.

22. A method as set forth in claim 1 wherein the steps are repeated for a plurality of identified vehicles each having a separate repair process in the same repair shop.

23. A method as set forth in claim 22 further including the step of calculating an average of the estimated total labor hours for the plurality of identified vehicles in the same repair shop.

24. A method as set forth in claim 23 further including the step of calculating an average of the total shop production hours for the plurality of identified vehicles in the same repair shop.

25. A method as set forth in claim 24 further including the step of calculating an average of the production process efficiency for the repair processes by dividing the average total shop production hours by the average estimated total labor hours.

26. A method as set forth in claim 1 wherein the steps are repeated for a plurality of identified vehicles each having a separate repair process in a plurality of different repair shops.

27. A method as set forth in claim 26 further including the step of calculating an average of the estimated total labor hours for the plurality of identified vehicles in the plurality of different repair shops.

28. A method as set forth in claim 27 further including the step of calculating an average of the total shop production hours for the plurality of identified vehicles in the plurality of different repair shops.

29. A method as set forth in claim 28 further including the step of calculating an average of the production process efficiency for the repair processes by dividing the average total shop production hours by the average estimated total labor hours.

30. A method as set forth in claim 1 further including the step of performing the repair process on the identified vehicle.

31. A method as set forth in claim 30 wherein the step of performing the repair process is further defined as performing at least one of a disassembly step, a frame repair step, a metal repair step, a preparation step, a painting step, a reassembly step, a testing step, and a

detailing step.

32. A method as set forth in claim 1 wherein the step of creating a vehicle identifier is further defined as creating a vehicle identifier based upon at least one of a vehicle brand data, a vehicle year data, a customer identifying data, and a repair order data.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None